

AMENDMENTS TO THE CLAIMS

1. (currently amended) A process for enhancing the yield of molecular sieve zeolite during the synthesis from a sodium aluminosilicate reaction mixture, said process comprising the step of adding at an intermediate stage of crystallization a source of aluminum and an acid to the sodium aluminosilicate reaction mixture and allowing the mixture to crystallize, wherein the adding of the source of aluminum serves to make up for the aluminum deficiency arising in the sodium aluminosilicate reaction mixture during crystallization.
2. (original) A process as claimed in claim 1, wherein the source of aluminum is added to the sodium aluminosilicate reaction mixture over an extended period of time.
3. (original) A process as claimed in claim 1, wherein the source of aluminum is added to the sodium aluminosilicate reaction mixture in a dilute form.
4. (original) A process as claimed in claim 1, wherein alumina is present in the ionic form in the source of alumina.
5. (original) A process as claimed in claim 1, wherein the source of aluminum is added to the sodium aluminosilicate reaction mixture under constant agitation.
6. (original) A process as claimed in claim 1, wherein the sodium aluminosilicate reaction mixture is depleted of aluminum and enriched in un-reacted soda and silica at the intermediate stage of crystallization.
7. (currently amended) A process as claimed in claim 1, wherein the intermediate stage of crystallization at which aluminum source and the acid is added occurs in the range of 0.5 hour to 48 hours.
8. (original) A process as claimed in claim 1, wherein the molecular sieve zeolite obtained is selected from the group consisting of low silica to alumina ratio zeolite, a medium silica to alumina ratio zeolite and a high silica to alumina ratio zeolite.
9. (previously presented) A process as claimed in claim 1, wherein the molecular sieve

zeolite obtained is selected from the group consisting of zeolite Y, X, A, ZSM-5, ZSM-11, Beta, Omega, clinoptilolite and Mordenite.

10. (currently amended) A process as claimed in claim 1, wherein the source of aluminum is selected from the group consisting of aluminum salts, bayerite, pseudoboehmite, alumina gel and alumina sol and the acid is selected from the group consisting of sulfuric acid and hydrochloric acid.
11. (original) A process as claimed in claim 10, wherein the aluminum salt is selected from the group consisting of aluminum sulfate, sodium aluminate, aluminum oxalate, aluminum formate, and aluminum trihydrate.
12. (currently amended) A process for enhancing yield of molecular sieve zeolite during synthesis from a sodium aluminosilicate reaction mixture, said process comprising steps of:
 - (a) preparing a sodium aluminosilicate seed mixture;
 - (b) preparing a sodium aluminosilicate gel reaction mixture;
 - (c) adding the seed mixture of step (a) to the gel reaction mixture of step (b) to obtain molecular sieve precursor mixture;
 - (d) heating the molecular sieve precursor mixture to a temperature sufficient for crystallization to occur;
 - (e) adding a source of aluminum and an acid to the molecular sieve precursor mixture at an intermediate stage of crystallization, wherein the molecular sieve precursor mixture is depleted of aluminum and enriched in soda and silica at the intermediate stage wherein the adding of the source of aluminum serves to make up for the aluminum deficiency arising in the molecular sieve precursor mixture during crystallization, and
 - (f) crystallizing molecular sieve zeolite product, recovering of crystallized product by filtration; washing the same with hot demineralized water to obtain molecular sieve zeolite with pH below 9.
13. (currently amended) A process as claimed in claim 12, wherein the molecular

sieves are selected from the group consisting of zeolite A, X, Y, Mordenite, Beta, Omega, clinoptilolite, ZSM-5 and those having sodium aluminosilicate framework can be enhanced by addition of aluminum source and an acid during intermediate stage of crystallization.

14. (previously presented) A process as claimed in claim 12, wherein the precursor gel mixture has wide range of composition expressed in the molar ratio as:
0.5-15 Na₂O: Al₂O₃: 1-200SiO₂: 50-1000 H₂O.
15. (currently amended) A process as claimed in claim 12, wherein the crystallizing molecular sieve zeolite product occurs in from 24 hrs to 120 hrs.
16. (original) A process as claimed in claim 12, wherein the crystallizing molecular sieve zeolite product occurs at a temperature that varies from 45 to 180 °C.
17. (currently amended) A process as claimed in claim 12, wherein the source of aluminum is selected from group consisting of aluminum sulfate, sodium aluminate, aluminum oxalate, aluminum formate, aluminum trihydrate, colloidal alumina, and alumina gel.
18. (currently amended) A process as claimed in claim 12, wherein the quantity of aluminum compound added at intermediate stage of crystallization is in the range of 0.5 to 25 wt% expressed as Al₂O₃ on the basis of total silica (SiO₂) present in the precursor gel mixture.
19. Cancelled.
20. (currently amended) A process as claimed in claim 19, wherein the mineral acid used is selected from the group consisting of sulfuric acid and hydrochloric acid.
21. Cancelled.